

## Questions and Answers about Soil Testing at “My School” Daycare One Sinco Place, East Hampton, CT

### **BACKGROUND**

This fact sheet was written to give you information about soil testing that was done recently in the playground at the ‘My School’ daycare center.

The ‘My School’ daycare is located on a parcel of land that was once used for manufacturing. The Sinco Inc. company made plastic safety nets and used various chemicals in their manufacturing process. After they stopped manufacturing about 10 years ago, the company did soil cleanup on the property in areas where their chemicals had contaminated the soil. However, at that time, the company discovered that some areas of soil on the property contained arsenic at levels above Connecticut’s soil cleanup standards. The company did not do any soil cleanup for arsenic because, according to the company:

- they did not use arsenic as part of their manufacturing process; and
- they thought that any arsenic was naturally-occurring.

The areas of the property where high arsenic was originally found are now covered with buildings or pavement.

In January 2008, during the CT Department of Public Health’s (DPH’s) daycare licensing process, DPH worked with the CT Department of Environmental Protection (DEP) to review past reports of testing and cleanup of the property. Because the soil in the playground area had never been tested, DEP and DPH asked the property owner (Global Storage LLC) to test the playground soil. That testing was completed on February 7, 2008.



### **WHAT WAS FOUND IN SOIL IN THE PLAYGROUND?**

Soil beneath the layer of woodchips was collected from 14 different locations across the playground. At all locations, the top 3 inches of soil was tested. At some locations, slightly deeper soil was also tested (3 to 6 inches and 9 to 12 inches below ground surface).

At almost all the places tested in the playground, arsenic is present at levels higher than Connecticut’s soil cleanup standard. The highest level of arsenic found is about twenty-six times greater than the cleanup standard. Most of the samples are 3 to 5 times higher than the cleanup standard.

The 3 soil samples with the highest amounts of arsenic were also tested for other contaminants such as pesticides and lead. Results from those tests are not yet available.

## **WHAT IS ARSENIC? WHERE DID IT COME FROM?**

Arsenic is found naturally in soil and rock at low levels. The major uses of arsenic are as wood preservatives and agricultural pesticides.

We don't know for sure where the arsenic found in the playground soil came from. The company that made safety nets says they did not use any arsenic in their manufacturing. Natural (background) levels of arsenic in soil vary across CT, depending on the local geology. However, some of the levels of arsenic found in the playground soil at My School are higher than we typically see naturally. It is possible that arsenic-contaminated soil was brought in from another location as fill.

## **UNDERSTANDING EXPOSURES TO CHEMICALS**

Any chemical that enters your body can be harmful if you take in too much. Whether your health will be affected by a chemical that gets into your body depends on several factors.

- How much of the substance you take in.
- How long you are exposed to it.
- How it enters the body (for example, through eating, drinking, breathing, or touching).
- Your age, general health and other individual traits that determine how susceptible you are to health effects.
- Other exposures you have to the same or similar substances.
- How toxic the substance is.

You cannot be harmed by chemicals in the soil unless you are **exposed** to the chemical, in large enough amounts. **Exposed** means that you have come into contact with the chemical and it has gotten into your body. The three ways soil can get into the body are:

- ✓ **Eating** (for example, putting dirty fingers or toys in the mouth)
- ✓ **Touching** (some chemicals can be absorbed into the body through the skin; arsenic is not easily absorbed through the skin.)
- ✓ **Breathing** soil dust particles in the air.

## **DID THE ARSENIC IN THE PLAYGROUND SOIL HARM THE CHILDREN?**

Not likely.

The only way for a child to be exposed to enough arsenic to cause harm is if the child plays directly in the soil on a daily basis, such as for many years. Children at My School have not had much chance to come into contact with playground soil for the following reasons:

- The playground at My School has a layer of woodchips covering the soil. This helps minimize the amount of contact children have with the soil.
- Children have not used the playground for very long because My School opened less than one year ago. In addition, the playground has not been used very much during the cold winter weather.

## **SHOULD I HAVE MY CHILD TESTED FOR ARSENIC EXPOSURE?**

We do not recommend that children be tested. There are two reasons why we do not recommend medical testing.

First, we believe that children were not exposed to enough arsenic, for long enough periods of time for medical testing to be useful. Second, while medical tests for arsenic exist, they cannot easily determine whether a child has been exposed to above-average arsenic levels. More importantly, tests can not tell you whether arsenic in your child's body will harm his/her health.

It is important to know that all of us have measurable amounts of arsenic in our bodies. Arsenic is present in large amounts in fish and shellfish. The type of arsenic in fish and shellfish is not harmful. However, standard medical tests cannot distinguish between the type of arsenic in soil (which can be harmful) from the type of arsenic in fish and shellfish (which is not harmful).

## **WHAT WILL BE DONE WITH THE PLAYGROUND TO ADDRESS THE ARSENIC IN THE SOIL?**

DPH and DEP are working with the property owner (Global Storage LLC.) on a cleanup plan for the playground. This plan will likely involve limited soil removal in areas of the playground with the highest arsenic levels. The cleanup plan is also likely to include placing additional layers of covering across the entire playground (such as heavy landscaping fabric, crushed stone, and wood chips). When these actions are complete, children will not be able to come into contact with playground soil containing arsenic. The property owner would like to begin the cleanup process on the playground during the week of February 18th, provided that cover materials are available.



## **SOME ADDITIONAL INFORMATION ABOUT ARSENIC**

We know a lot about health effects from exposure to arsenic by studying people who were exposed to very high levels of arsenic for a long time. Eating or breathing arsenic for a long time can cause a darkening of the skin, redness or swelling of the skin, and the appearance of “corns” or “warts” on the skin. In addition, studies have shown that exposure to arsenic every day for many years can increase the risk of several types of cancer (skin, liver, bladder lung).

Important: We do not expect to see any of these health effects in children at My School daycare because exposure to soil is not high enough.

## **WHAT IF I HAVE MORE QUESTIONS?**

My School will be hosting an informational meeting for parents in late February. Health and environmental experts will be available at the meeting to answer your questions and concerns. You can also contact the state or local health department, or the DEP directly using the following contact information. If your child's pediatrician has questions about health issues and arsenic, they may also call the DPH contact below.

**CT Department of Public Health**

**Sharee Rusnak**

**860-509-7583**

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**Chatham Health District**

**Thad King, Director of Health**

**860-267-9601**

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**Gil Richards**

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**860-424-3523**

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